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Biotechnology Notes

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Biotechnology Notes, a compilation of agency activities, news events, and upcoming meetings, is prepared for members of the U.S. Department of Agriculture's (USDA) Committee on Biotechnology in Agriculture (CBA) by USDA's Office of Agricultural Biotechnology (OAB).

INSIDE USDA

BT POTATO SUBJECT OF PETITION

The public has until January 31, 1995 to submit comments on a petition submitted to USDA's Animal and Plant Health Inspection Service (APHIS) from Monsanto Company, St. Louis, MO, requesting that seven lines of genetically engineered Russet Burbank potatoes not be regulated by APHIS because there is no plant pest risk. The potatoes were engineered to resist the Colorado potato beetle.

The potatoes were modified to produce an insect control protein derived from *Bacillus thuringiensis*, a common soil bacterium. The potatoes were evaluated at 34 locations between 1991 and 1993.

In addition to seeking USDA approval, Monsanto has also sent the Environmental Protection Agency (EPA) an application to register this plant as a transgenic plant pesticide. This is the first such application EPA has received in which a plant has been genetically altered to produce a pesticide. Monsanto has also sent EPA a pesticide petition requesting a tolerance exemption for residues of the plant pesticide's active ingredient. APHIS and EPA are coordinating their review of these potato lines to avoid duplication of effort and assure that all issues are addressed.

To receive a copy of the petition, please call Kay Peterson at 301-436-7601. This telephone number will change to 301-734-7601 during January when the agency moves to Riverdale, MD.

VIRUS-RESISTANT SQUASH NO LONGER USDA REGULATED

On December 7, 1994, APHIS determined that genetically engineered, virus resistant yellow crookneck squash was no longer considered a regulated article. APHIS' decision

came after reviewing data submitted by the Upjohn Company, an analysis of other scientific data, and a review of comments from the public.

The squash resists infection by two plant viruses, zucchini yellow mosaic virus and watermelon mosaic virus, type II. The vector system used to transfer the viral coat protein genes was derived from *Agrobacterium tumefaciens*, a plant pathogen. The squash has been field tested since 1990 at about 46 sites in 10 states. Field reports indicate no observable adverse effects on plants, nontarget organisms, or the environment.

According to John Payne, Acting Director of the Biotechnology, Biologics and Environmental Protection Division of APHIS, "The ZW-20 squash is as safe to grow as traditionally bred virus resistant squash."

APHIS first received a petition from the Upjohn Company and its subsidiary, Asgrow Seed Company, in mid-1992 seeking a determination that the squash no longer be regulated. Later that year, APHIS published the petition in the *Federal Register* and offered the public 45 days to submit any comments. The comment period was reopened for an additional 60 days to get more feedback on several scientific issues. In May of 1994, APHIS announced the availability of an environmental assessment and finding of no significant impact, along with a 45-day period for public comment. This was followed by a public meeting.

For more information, please call James White at 301-436-7612; during January, the number will change to 301-734-7612.

NEWS AROUND THE NATION (AND THE WORLD)

STUDY OF PUBLIC PERCEPTIONS PROPOSED

Three British researchers have proposed a research project that will examine the relationship between biotechnology and the European public. It is entitled "An International Study of Policy, Media Coverage and Public Perceptions, 1980-1996." The project is scheduled to start in mid 1995 and take 30 to 36 months to complete. Part of the study will be applied to a survey that will be conducted in 1996 throughout 16 European countries. Attitudes in the United States and Japan may be analyzed in a parallel survey. For more details, please call Jon Miller, Director, The International Center for the Advancement of Scientific Literacy, at 312-549-0606; Fax: 312-549-5199.

PLANNING AHEAD

Lillehammer, Norway, site of the 1994 Winter Olympic Games, will be the venue for a meeting of the 42nd International Congress of Meat Science and Technology entitled, "Meat for the Consumer," September 2-6, 1996. Preliminary registration is now underway.

Two other meetings of note will take place in Lillehammer the week before. The first is the 47th Annual Meeting of the European Association for Animal Production, August 26-29. From August 30-31, there will be an open seminar addressing consumer concerns about the application and regulation of new biotechnological techniques in animal production and meat science. For more details, please write to Gunnar Wilhelmsen, Royal Norwegian Embassy, 2720 34th St., N.W., Washington, DC 20008 or to the Scientific Secretariate, 42nd ICoMST, MATFORSK, Norwegian Food Research Institute, Oslovn 1, N-1430 As, Norway.

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FIRST ANNOUNCEMENT -- POTATO SYMPOSIUM

"The Fourth International Symposium on the Molecular Biology of the Potato" will take place July 17-21 in Wageningen, The Netherlands. The program includes a session on the applications of transgenic potatoes as well as genome analysis and mapping, gene regulation, development and reproduction, and disease and pest resistance. For more details, please write to IAC-section OCC, P.O. Box 88, 6700 AB Wageningen, The Netherlands; or call 08370-90232; Fax: 08370-18552.

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PUT SOME TANGO IN YOUR TUMEFACIENCE

Argentina will host the Second Latin American Meeting of Plant Biotechnology -- REDBIO '95, June 4 to 9 in Iguazu Falls. For the Latin American countries whose economies depend heavily on plant production, agricultural biotechnology could have a significant impact.

The meeting will include symposia on diverse topics such as field trials of transgenic plants, advances in cellular and molecular plant biology, resistance to biotic stress, and micropropagation. There will be six roundtable discussions, three focusing on socio-economic developments, as well as workshops on cereals, roots and tubers, forage crops, forest crops, legumes, vegetables and ornamental plants, industrial crops, and fruit species. A few grants are available for Latin American scientists with an advanced

degree. There will be poster presentations as well as commercial exhibits. For more information please write to General Secretariat, Sra. Sonia Lafon, INGEBI - CONICET, Obligado 2490, 1428 Buenos Aires, Argentina; Fax: 54-1-786-8578; E-mail: redbio@ingebi.uba.ar

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EU ISSUES PATENT TO CALGENE

It was announced November 17, 1994 that the European Union (EU) had issued Calgene Inc. of Davis, Ca, a patent for its FLAVR SAVR gene, which delays the softness of vine-ripened fresh tomatoes. In the United States, a patent was issued to Calgene in 1989 for the same gene. Earlier this year, the company announced that it had entered into an agreement with two companies to process the tomatoes -- Zeneca and Campbell Soup Company. Calgene retains exclusive, world-wide rights to use the FLAVR SAVR gene for fresh market tomatoes.

The genetically engineered tomato is marketed under the name MacGregor's tomatoes by Calgene Fresh. So far the tomato has only been sold in 733 Mid-west and West coast stores, but distribution will increase to 2,500 stores by this June. For more information, please call Carolyn Hayworth at Calgene at 916-753-6313.

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FOOD FORUM: A PRIVATE SECTOR VIEW

Speaking at the National Forum on Meeting the Challenge: Health, Safety, and Food for America, Susan Harlander, Director of Research and Development at Land O'Lakes, Minneapolis, MN, said sustaining the U.S. food system will require strategic focus, innovation, collaboration, and commitment. Harlander cited the most relevant issues the nation faces: feeding an expanding global population, changing food and ag policies due to smaller percentage of farmers, sustaining food production systems to protect the environment, and eating wisely.

Harlander recommended stronger partnerships between academia, government, and industry that are more collaborative than usual and which include the consumer. "Without public support," emphasized Harlander, "the best research and development in the world may not be applied."

The forum was held November 21-22, 1994 in Washington, DC, and it was organized by the White House Office of Science and Technology Policy and the Committee on Health,

Safety, and Food Research and Development of the National Science and Technology Council in cooperation with the National Academy of Sciences. The forum was designed to provide input for the Administration. For more details, please write to the Executive Office of the President, Office of Science and Technology Policy, Washington, DC 20500.

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MAKING PTO MORE USER FRIENDLY

In a press conference held December 22 in Crystal City, Virginia, the U.S. Patent and Trademark Office (PTO) announced changes in patent guidelines that will make it easier for biotechnology companies to receive patents for their inventions. The new guidelines specify that if an applicant presents a scientifically plausible use for the claimed invention, it will be sufficient to satisfy the utility requirement. The guidelines will be published for public comment through February 24 and then will be finalized in early March.

In addition the PTO will train both examiners and supervisors on how to use the new guidelines. Two biotechnology practice specialists will also be hired to ensure that office actions are consistent with the guidelines. The PTO will also be looking into the possibility of applicants filing their applications electronically.

IN CASE YOU WEREN'T THERE

■ The Biotechnology Conference at Clemson University in Clemson, SC, December 6-9, 1994, drew about 100 experts from academia, government, and industry to discuss plants and microbes, environmental biotechnology, biomedicine, bioengineering, food safety, and biocontrol. Of particular note was a paper presented by a team of scientists from Clemson on the "Risk of Gene Escape from Insect Pollinated Crops to Related Wild Species." The group selected the strawberry to study gene flow since both the cultivated and the wild species often grow near each other, share major pollinators (bees), have overlapping flowering periods, and are cross-compatible. The objectives of the research are to quantify the extent of gene flow using molecular markers, study ecological factors that may influence hybrid seed formation, and assess the relative vigor of hybrid versus non-hybrid progeny. To learn more about the conference, which was sponsored by Clemson University, the Greenville Hospital System, and Bioengineering Alliance of South Carolina, or to receive a copy of the proceedings, please call either William R. Marcotte, Jr. at 803-656-0119 (fax: 803-656-0435); or Ralph A. Dean at 803-656-5737 (fax: 803-656-0274).

Biotech Report

NEW PUBLICATIONS

- "Technology Transfer: Working for Collaboration, Commerce, and Competitiveness." A report of the advisory committee on development and transfer of biotechnology. Prepared by the North Carolina Biotechnology Center, September 1994. To receive a copy, please call 919-541-9366; Fax: 919-990-9544.
- "Advanced Technology Program Proposal Preparation Kit." Prepared by the U.S. Department of Commerce, National Institute of Standards and Technology. November 1994. To receive a copy, please call 1-800-ATP-FUND or 1-800-287-3863; Fax: 301-926-9524 or 301-869-1150; E-mail: atp@micf.nist.gov
- "Report of the Joint USDA/University Workshop on Enhancing Cooperation in Food Safety Research and Education, March 8-9, 1994, Washington, DC." To place an order for a copy (\$15), please call the Agricultural Research Institute at 301-530-7122; Fax: 301-530-7007.

UPCOMING MEETINGS

Jan. 12: "The Green Conference". Washington, DC. Organized by the International Society for the Advancement of Biotechnology and Genetic Engineering News. For details, please call 301-652-4951; Fax: 301-652-3072.

Jan. 15-19: "Plant Genome III. The International Conference on the Status of Plant Genome Research." To be held at the Town & Country Hotel, San Diego, CA. Contact: Scherago International, Inc., 11 Penn Plaza, Suite 1003, New York, NY 10001. Tel: 212-643-1750. FAX 212-643-1758.

Jan. 18-21: "1995 U.S. Dairy Forum." LaQuinta, Ca. Sponsored by the International Dairy Foods Association. For details, please call 202-737-4332; Fax: 202-331-7820.

Jan. 28: "Aquatech '95: Pacific Rim Opportunities in Aquatic Biotechnology." Sponsored by the Canadian Aquatic Biotechnology Network. Vancouver, British Columbia. For details, please call 604-983-3173; Fax: 604-983-3183; E-mail: 75313.3121@compuserve.com

Jan. 30-Feb. 2: Weed Science Society of America. Thirty-fifth meeting. Seattle, WA. To pre-register, please call Robert Schmidt at 217-352-4212.

Feb. 6-9: Fourth Pacific Rim Biotechnology Conference. Melbourne, Australia. Contact Ian Prince, Dept. of Chemical Engineering, Monash University, Clayton, VIC. 3168, Australia; tel: 61-3-905-3449; Fax: 61-3-905-5686; E-mail: ian.prince@eng.monash.edu.au

Feb. 19-23: Seventh European Congress on Biotechnology. Nice, France. Call 33-1-4555-6946; Fax: 33-1-4555-4033.

March 17-23: Toward the Genetic Manipulation of Insects. Tamarron, Colorado. Sponsored by Keystone Symposia. Call 303-262-1230; Fax: 303-262-1525.

April 3-6: International Symposium on Weed and Crop Resistance to Herbicides, University of Cordoba, Spain. Call Jesus Jorin at 57-218439.

Biotechnology Notes is written by Marti Asner, public affairs specialist in USDA's Office of Agricultural Biotechnology. Any comments or suggestions may be sent to USDA/OAB, Room 1001, Rosslyn Plaza-E, 14th and Independence Ave., S.W., Washington, DC 20250-2200. Telephone: 703-235-4419; Fax: 703-235-4429; e-mail: masner@csrs.esusda.gov. This news publication is also accessible on Internet via Gopher.

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